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10/532,382

Examiner

Joseph P. Martinez

Applicant(s)/Patent under Reexamination

KUBOTA ET AL.

Art Unit

2873

| <b>√</b> | Rejected | _ | (Through numeral)<br>Cancelled |
|----------|----------|---|--------------------------------|
| =        | Allowed  | ÷ | Restricted                     |

| 2 | Non-Elected  |
|---|--------------|
| - | Interference |

| A | Appeal   |
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| Cla  | im       | Date         |  |              |  |                    | Claim Date                                       |  |  |           |          |  |          |             | [        | Cla      | aim      | Date     |                |          |               |          |     |          |          |        |                 |          |  |          |  |                 |          |           |
|--|----------|--------------|--|--------------|--|--------------------|--|--|--|-----------|----------|--|----------|-------------|----------|----------|----------|----------|----------------|----------|---------------|----------|-----|----------|----------|--------|-----------------|----------|--|----------|--|-----------------|----------|-----------|
|  |          | ,,           |  |              |  |                    | Γ  |  |  |           |          | П  |          |             | $\Box$   |          | П        | Т        | T              | Т        | Т             | $\neg$   | Ī   |          |          |        |                 |          |  |          |  | $\neg$          | $\neg$   | $\neg$    |
| Ø  | Original | 11/3/06      | İ  |              |  | ŀ                  |  |  |  |           | 7        | <u> </u>   | Original | - 1         | ŀ        |          |          |          |                |          |               | ı        |     | ā        | Original |        |                 |          |  |          |  |                 |          | I         |
| Final  | rig      | 1/3          |  |              |  |                    |  |  |  |           | i i      | =  | Ē        | 1           | - 1      |          | -        |          |                |          |               |          |     | Final    | Ē        |        |                 |          |  |          |  | ļ               |          | ļ         |
| _  | 0        | -            |  |              |  | ŀ                  |  |  |  | 1         | "        | 1  | 0        | ]           |          | .        | - 1      |          |                |          |               |          | ļ   | -        | 0        |        |                 |          |  |          |  | -               |          | -         |
| -  | 1        | 1            | ┢─   |              | ┝  | ┢                  | -  | Н  | $\vdash$   |           | <u> </u> | 十  | 51       | $\dashv$    | $\dashv$ |          | 一        | $\dashv$ | $\dashv$       | _        | +             | $\dashv$ | -   |          | 101      | $\neg$ |                 | $\neg$   |  |          |  | ᅱ               | -+       | $\dashv$  |
|  | 2        | Ì            | $\vdash$   | $\vdash$     | $\vdash$   |                    | $\vdash$   | Н  | $\vdash$   | _         | $\vdash$ | $\dashv$   | 52       | $\dashv$    | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$       | $\dashv$ | $\dashv$      | $\dashv$ | ŀ   |          | 102      | -      | $\dashv$        | $\dashv$ | -  | $\dashv$ | _  | $\dashv$        | -        |           |
| <b></b> -  | 3        | Ì            | $\vdash$   | $\vdash$     |  | ⊢                  | $\vdash$   | Н  | Н  | _         | $\vdash$ | $\dashv$   | 53       | -           | $\dashv$ | -        | $\dashv$ | $\dashv$ | +              | +        | +             | $\dashv$ | }   |          | 103      | -      | $\dashv$        |          | -  | $\dashv$ | $\dashv$   |                 | $\dashv$ |           |
| <u> </u>   | 4        | 1            | -  | -            | -  | -                  | -  | ⊢  |  |           | -        | -+   | 54       | <del></del> | -        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$       |          | -+            | ⊣        | ł   |          | 104      |        | $\dashv$        | -        |  |          | $\dashv$   | +               | -        |           |
|  | 5        | 1            | ⊢  | H            | ┝  |                    | -  | Н  | $\vdash$   |           | $\vdash$ | $\dashv$   | 55       |             | $\dashv$ |          | -+       | $\dashv$ | -+             | -        | +             | -        | H   |          | 105      | -      |                 |          |  | -        | -  | -               | -        |           |
| <u> </u>   | _        | 1            | -  | -            | -  | -                  | -  | Н  | -  |           | $\vdash$ | $\dashv$   | 56       | ┥           | $\dashv$ | -        | $\dashv$ | $\dashv$ | -+             | +        | $\dashv$      | $\dashv$ | ł   |          | 106      |        |                 |          |  |          |  |                 | $\dashv$ | -         |
|  | 6        |              | <u> </u>   | -            | <u> </u>   | ┝                  | -  | Н  | Н  |           | -        | -+   |          |             |          | $\dashv$ | $\dashv$ | +        | -              | +        | $\dashv$      | $\dashv$ | - 1 |          |          |        | $\dashv$        | $\dashv$ |  | $\dashv$ | $\dashv$   |                 | -        | -         |
| <u> </u>   | 7        | 7            | -  |              | _  | -                  |  | Н  | $\vdash$   |           | <u> </u> | $\dashv$   | 57       |             |          | -        | $\dashv$ | +        | +              | +        | +             | $\dashv$ | ŀ   |          | 107      |        |                 | -        |  |          | -1   | -               | $\dashv$ |           |
|  | 8        | 1            | <u> </u>   | L            | <u> </u>   | <u> </u>           | _  | 1  | _  |           | -        | 4  | 58       | _           |          |          | _        | 4        | +              | -        | 4             | -        | ŀ   |          | 108      | _      | $\dashv$        |          | _  | _        |  |                 | -        |           |
|  | 9        | 1            | _  | _            |  | <u> </u>           |  | ш  | _  |           | _        | -  | 59       | $\dashv$    | _        | _        | _        |          | -              | 4        |               | _        | -   |          | 109      | _      | _               | -4       |  |          |  |                 |          | _         |
|  | 10       | 1            | _  | L            |  | L                  | ļ  | Ш  |  |           | _        | _  | 60       |             |          | _        | _        | _        |                | $\dashv$ | -             | _        |     |          | 110      |        | $\Box$          | _        |  |          |  | $\perp$         | 4        | $\dashv$  |
| =  | -11      | <b>T</b> _   | <u> </u>   | <b> </b>     | ļ  | <u> </u>           | <u> </u>   | Ш  | Ш  | _         | _        |  | 61       | $\Box$      |          |          | _        | _        | _              | 4        | _             | _        | ļ   |          | 111      |        | Щ               |          |  | Ш        | Ш  | _               | _        | ᆚ         |
|  | 12       | 1            | L  | L            |  | <u> </u>           |  | Ш  | Щ  | _         | <u> </u> |  | 62       |             |          |          |          | _        | $\perp$        | $\perp$  | $\dashv$      | $\dashv$ | - 1 |          | 112      |        | Щ               |          |  |          |  |                 | _        |           |
|  | 13       | Щ            |  |              | _  | <u> </u>           |  | Ш  |  |           | _        | _  | 63       |             | $\dashv$ |          |          | ļ        | _              | _        | $\rightarrow$ | _        | ļ   |          | 113      |        | Щ               | _        |  | Ш        |  |                 | ]        | ᆜ         |
|  | 14       | Щ            | <u> </u>   |              | <u> </u>   | <u> </u>           | _  |  |  |           |          | _  | 64       |             |          |          |          | ļ        | _              |          | _             | _        | ļ   |          | 114      |        |                 |          |  |          |  |                 |          | Щ         |
|  | 15       |              |  |              |  | $oxedsymbol{oxed}$ |  | $\Box$   |  |           |          | [  | 65       |             |          |          |          |          |                |          |               | ]        | Į   |          | 115      |        |                 |          | Ш  |          | Ш  |                 |          |           |
|  | 16       | $\Box$       |  |              |  |                    |  |  |  |           |          |  | 66       |             |          |          | $\_\_$   | ا        |                |          | $\bot$        |          |     |          | 116      |        | Ш               |          |  |          |  |                 |          |           |
| -  | 17       |              |  |              |  |                    |  |  |  |           |          | J  | 67       |             |          |          |          |          | $\Box$         |          | $\Box$        |          | -   |          | 117      |        |                 |          |  |          |  |                 |          |           |
|  | 18       |              |  |              | -  |                    |  |  |  |           |          |  | 68       |             |          |          |          |          | $_{-}$ T       |          |               |          |     |          | 118      |        |                 |          |  |          |  |                 |          |           |
|  | 19       |              |  |              |  |                    |  |  |  |           |          | $\neg$   | 69       |             |          |          |          |          | $\neg$         | $\neg$   | $\neg$        |          |     |          | 119      |        |                 |          |  |          |  |                 |          |           |
|  | 20       |              |  |              |  | 1                  |  | $\Box$   |  | $\neg$    |          | T  | 70       |             |          |          |          | _        | $\dashv$       | 1        | 寸             | 7        |     |          | 120      |        |                 |          |  |          |  |                 | 寸        | 一         |
|  | 21       | Г            |  |              |  | Г                  |  | $\vdash$   |  | $\neg$    |          | $\exists$  | 71       |             |          |          | $\neg$   | $\neg$   | $\neg$         | $\neg$   | $\neg$        |          |     |          | 121      |        | П               |          |  |          |  |                 | 寸        | コ         |
|  | 22       |              |  |              |  |                    |  |  |  | $\dashv$  | -        | ij   | 72       |             |          |          | $\neg$   | $\neg$   | 寸              | _        | $\neg$        |          |     |          | 122      |        | П               |          |  |          |  |                 | T        | $\exists$ |
|  | 23       |              | $\vdash$   | $\vdash$     | T  | Т                  |  | $\vdash$   |  | $\neg$    |          | 7  | 73       |             |          |          | $\neg$   | $\dashv$ | $\dashv$       | $\dashv$ | $\dashv$      |          |     |          | 123      |        | П               |          |  |          | П  | $\Box$          | 寸        | $\neg$    |
|  | 24       | $\vdash$     |  | t            | T  |                    |  | $\vdash$   |  | $\dashv$  |          | 寸  | 74       |             |          |          |          | _        | _              | +        | 一             | $\neg$   |     |          | 124      |        | Н               |          |  |          |  | $\vdash$        |          | $\exists$ |
| <b></b>  | 25       | $\vdash$     | $\vdash$   | t            | $\vdash$   | $\vdash$           | <del>                                     </del> | <del>                                     </del> | $\vdash$   | $\dashv$  | -        | $\dashv$   | 75       |             |          | $\neg$   | -        | $\neg$   | -              | $\dashv$ | 7             | $\neg$   |     |          | 125      |        | $\vdash \vdash$ | $\vdash$ | $\vdash$   | М        |  |                 | 寸        | $\dashv$  |
| <del>                                     </del> | 26       | $\vdash$     | $\vdash$   | t            |  | $\vdash$           |  | $\vdash$   | $\vdash$   | $\dashv$  | -        | 一  | 76       | $\dashv$    |          | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$       | $\dashv$ | _             | $\dashv$ |     |          | 126      |        | Н               |          | $\vdash$   |          |  | $\vdash$        | 一        | $\vdash$  |
| <del>                                     </del> | 27       | $\vdash$     | $\vdash$   |              | $\vdash$   | $\vdash$           | -  |  | -  | $\dashv$  | $\vdash$ |  | 77       |             |          | -        | -        | -        | -              | -        | 一             | $\neg$   |     |          | 127      |        | $\vdash$        |          |  | $\vdash$ |  | $\vdash$        |          | $\dashv$  |
| <del>                                     </del> | 28       | <del> </del> | -  | <del> </del> | <del>                                     </del> | $\vdash$           | $\vdash$   | $\vdash$   | <del>                                     </del> | $\dashv$  | $\vdash$ | $\dashv$   | 78       | $\vdash$    | $\vdash$ | $\dashv$ | -        | -        | $\dashv$       | -        | -+            |          |     |          | 128      |        | Н               | $\vdash$ | -  | -        | <del>                                     </del> | $\vdash$        | $\dashv$ | $\dashv$  |
| $\vdash$   | 29       | $\vdash$     | $\vdash$   | $\vdash$     | $\vdash$   | +                  | -  | <del>                                     </del> | $\vdash$   | $\dashv$  | -        | -  | 79       | $\vdash$    |          | $\dashv$ | -        |          | $\dashv$       | $\dashv$ | $\dashv$      | $\dashv$ |     |          | 129      |        | H               |          | -  | $\vdash$ | $\vdash$   | $\vdash$        | $\dashv$ | $\dashv$  |
|  | 30       | $\vdash$     | $\vdash$   | ├            | -  | ┼-                 | $\vdash$   | $\vdash$   |  | $\dashv$  | -        |  | 80       | $\dashv$    |          |          |          | $\dashv$ | -+             | -+       | ╛             | $\dashv$ |     |          | 130      |        | $\vdash$        |          |  |          | $\vdash$   | $\vdash$        |          | $\dashv$  |
|  | 31       | ├            | -  | ├-           | $\vdash$   | ├-                 | $\vdash$   |  |  | $\dashv$  | -        | $\dashv$   | 81       |             | -        | -        |          | $\dashv$ | $\dashv$       | -+       | $\dashv$      | $\dashv$ |     |          | 131      |        | $\vdash$        | $\vdash$ | -  | Н        | $\vdash$   | $\vdash$        | $\dashv$ | $\dashv$  |
| <u> </u>   | 32       | -            | -  | ├            | $\vdash$   | $\vdash$           | $\vdash$   | $\vdash$   | $\vdash$   | $\dashv$  | -        | -  | 82       |             |          |          |          |          | -+             | $\dashv$ | - 1           | $\dashv$ |     |          | 132      | _      | Н               | $\vdash$ | _  | -        | -  | $\vdash$        | $\dashv$ | Н         |
|  | 33       | -            | <del>                                     </del> | $\vdash$     | -  | ┼                  | $\vdash$   | $\vdash$   |  | $\dashv$  | $\vdash$ |  | 83       | Н           | $\vdash$ | -        | $\dashv$ | $\dashv$ | -              | $\dashv$ | -+            | -        |     |          | 133      |        | Н               |          | _  | H        | $\vdash$   | $\vdash$        |          | $\dashv$  |
|  |          | ├            | $\vdash$   | ├            | ├-   | ├                  |  |  | É  | $\dashv$  | $\vdash$ |  |          | $\dashv$    |          |          |          | $\dashv$ |                | -+       | -+            |          |     |          | 134      |        |                 |          |  | $\vdash$ | $\vdash$   | $\vdash$        | $\dashv$ | $\dashv$  |
|  | 34       | -            | -  | ├            | $\vdash$   | ┢                  | -  | $\vdash$   | H  |           | $\vdash$ | 4  | 84       | Н           |          | -        | -        | $\dashv$ |                | +        | $\dashv$      | _        |     |          |          |        | $\vdash$        | $\vdash$ | <del> </del>                                     | $\vdash$ | $\vdash$   | -               |          | $\vdash$  |
| <u> </u>   | 35       | <u> </u>     | -  |              | _  | $\vdash$           | $\vdash$   | $\vdash$   | $\vdash$   | $\square$ | $\vdash$ | -  | 85       | H           |          | _        |          | $\dashv$ |                | -        | -             | $\dashv$ |     | <u> </u> | 135      |        | Ш               |          | <u> </u>   |          |  |                 |          | $\dashv$  |
| <u> </u>   | 36       | _            | <u> </u>   | ⊢-           | $\vdash$   | $\vdash$           | <u> </u>   | $\vdash$   | $\vdash$   | $\Box$    |          | _  | 86       | Щ           |          |          | _        | $\dashv$ |                | $\dashv$ | 4             | _        |     |          | 136      |        | Н               | $\vdash$ | <u> </u>   | $\vdash$ | Н  | $\vdash \vdash$ |          | Щ         |
| <u> </u>   | 37       |              | <u> </u>   | <u> </u>     | <u> </u>   | <del> </del>       | <b> </b>   | <b> </b>   | <b> </b>   | Щ         | <u> </u> | _  | 87       |             |          |          |          | $\dashv$ | _              | $\dashv$ | _             | _        |     |          | 137      |        |                 |          | <u> </u>   | <u> </u> | <u> </u>   | $\vdash \vdash$ |          | ,         |
|  | 38       |              | <u> </u>   | _            | _  | _                  | L  | <u> </u>   | Ш  | Щ         | $\vdash$ |  | 88       |             |          |          |          | _        | _              | _        | _             | _        |     |          | 138      |        |                 |          | L  | _        | L  | $\sqcup$        |          |           |
| <u> </u>   | 39       | L            |  | _            | _  | L                  | _  | $oxed{oxed}$                                     | <u> </u>   | Щ         | L_       |  | 89       | Ш           |          | _        |          | _        |                | $\perp$  | _             | $\Box$   |     |          | 139      |        |                 |          |  |          | Ш  | Ш               |          | $\sqcup$  |
|  | 40       |              | _  | <u>L</u>     | 匚  | _                  | L  |  |  | Ш         | L        |  | 90       |             |          |          |          |          |                | _        | _             |          |     |          | 140      |        | Ш               |          | L_   | L_       | Ш  | Ш               |          |           |
|  | 41       |              |  |              |  |                    | L  |  | L  |           | L        |  | 91       |             |          |          |          |          | _:[            |          | $\perp$       |          | ļ   |          | 141      |        |                 |          | L  |          |  |                 |          |           |
|  | 42       | L            | L  | 匚            |  | L                  | L  |  |  |           |          |  | 92       |             |          |          |          |          |                |          |               |          |     |          | 142      |        | Ш               |          | L  |          |  | $oxed{oxed}$    |          |           |
|  | 43       |              |  | 匚            |  |                    | Ĺ  |  |  |           |          | $oldsymbol{ol}}}}}}}}}}}}}}}}$ | 93       |             |          |          |          |          | $\Box$         |          |               |          |     |          | 143      |        |                 |          |  |          |  |                 |          |           |
|  | 44       |              |  |              |  |                    |  |  |  |           |          | $\Box$   | 94       |             |          |          |          |          | $\Box$         | $\Box$   | J             |          | - 1 |          | 144      |        |                 |          | L  |          |  |                 |          |           |
|  | 45       |              |  |              |  | Ī                  | Π  |  |  |           |          | •  | 95       |             |          |          |          |          |                |          | $\Box$        |          |     |          | 145      |        |                 |          |  |          |  |                 |          |           |
|  | 46       |              |  |              |  | T                  | İ  |  |  |           |          |  | 96       |             |          |          |          |          |                |          | $\neg$        |          | - 1 |          | 146      |        |                 |          |  |          |  |                 |          |           |
|  | 47       |              | 1  | t            |  | 1                  | Г  | П  |  |           |          | ヿ  | 97       |             | $\Box$   |          |          | 1        |                | 寸        | 寸             |          | 1   |          | 147      |        |                 |          |  |          | Г  | П               |          | П         |
|  | 48       | -            |  | t-           | <del>                                     </del> | 1                  | $\vdash$   | 1  | Г  | $\neg$    |          | -  | 98       | Н           | Н        | $\vdash$ |          | ヿ        | $\neg \dagger$ | 寸        | _             | $\neg$   |     | <u> </u> | 148      |        | П               |          | $\vdash$   |          | Т  | Н               | _        | М         |
|  | 49       |              |  | t            | Г  | t                  | ⇈  | t  |  | $\vdash$  |          | $\dashv$   | 99       | Н           | $\vdash$ | Н        | -        |          | -              | _        | ヿ             | $\dashv$ |     | <b></b>  | 149      |        | $\vdash$        |          | ┢  | $\vdash$ | T  | Н               | $\dashv$ | П         |
|  | 50       | -            | -  | T            | $\vdash$   | $\vdash$           | $\vdash$   | T  | $\vdash$   | $\dashv$  | $\vdash$ | $\dashv$   | 100      | $\vdash$    | $\vdash$ | $\vdash$ |          | $\dashv$ | $\dashv$       | $\dashv$ | _             | -        |     |          | 150      |        | Н               |          | <del>                                     </del> | _        | _  | $\vdash$        | $\dashv$ | 一         |
|  | , ,,,,   | Ь_           | 1  |              | 1  | 1                  | 1 -  | 1  | L  |           |          |  |          | 1           | . 1      |          |          | - 1      |                | - 1      | 1             |          |     |          |          |        | ı I             |          |  | ı        | ı  |                 |          |           |